UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 7
11201 Renner Boulevard
Lenexa, Kansas 66219

MAY 15 2014

RCRA
531893

Mr. Lawrence C. Rosen
Environmental Operations, Incorporated
1530 South Second Street, Suite 200
St. Louis, Missouri 63104-4500

RE: Comments on the Annual Baseline Groundwater Monitoring Report Dated April 4, 2014, for the Solutia - J.F. Queeny Site, St. Louis, Missouri
EPA ID No. MOD 004 954 111

Dear Mr. Rosen:

The U.S. Environmental Protection Agency Region 7 and the Missouri Department of Natural Resources have reviewed the subject document and are providing the following comments to be addressed in a revised submittal within 30 days of receipt of this letter.

1. The report does not represent a baseline of contaminant concentrations in groundwater at the site and should be re-titled "Annual Groundwater Monitoring Report."

2. The report discusses conceptual site model, but does not explain how the site groundwater monitoring system fits the conceptual site model. The report should discuss if the monitoring system is a good fit for the site. The purpose of conducting the groundwater monitoring should be made clear in each annual groundwater monitoring report. Assessing whether the monitoring system fits this model can provide support in demonstrating that the full extent of contaminant transport has been documented. When data contradicts these conclusions, then the report should be focused on providing a rationale for the unexpected results and/or recommending additional monitoring wells so that extent can be fully documented.

3. The report states that non-aqueous phase liquid measurements were obtained. However, there is no further discussion. The report should include a table indicating NAPL thicknesses or a statement that NAPL was not observed during the reporting period.

4. The report discusses previous hydraulic conductivity data conducted via slug testing and both horizontal and vertical flow directions. The report should also include calculated horizontal and vertical flow gradients, effective porosity and rate of horizontal and vertical groundwater flow. This item allows us to estimate the rate of contaminant migration and to optimize sampling frequency for assessing plume migration.

5. The report does not include comparison of the measured total depth with the as-built well depth to determine the percent of wellbore siltation. Total well depths should be measured annually in all active wells and should be compared to as-build well depth measurements.

If more than 10 percent of the well screen is occluded then well maintenance should be conducted prior to the next scheduled sampling event. These activities should be documented in the annual report.

6. Significantly elevated levels of toluene, benzene, chlorobenzene, trichloroethene, tetrachloroethene, and/or daughter compounds remain in groundwater at one or more of the source areas. Although there has been significant reduction of one or more of these compounds in some of the source monitoring wells, additional groundwater monitoring events are necessary in order to assess the potential rebound of groundwater contaminant concentrations as a result of contaminant desorption from subsurface soil. To that end, all of the source groundwater monitoring wells at Areas FF, APA, and FBCSA should be sampled and analyzed for VOCs and alachlor during the upcoming July, 2014 sampling events. The evaluation of the results from this sampling event should be included and evaluated in the draft Interim Measures Completion Report. In addition, the IMCR should include multiple cross sections of each source area that depicts the vertical and horizontal extent of contaminant plumes in relation to stratigrapghy, monitoring well locations, and monitoring well screened intervals. Isopleth maps of contamination in the groundwater horizons should also be developed. This information is needed to better understand the dimensions of contaminant plumes and refine the conceptual site model. Knowing the dimensions of the contaminant plumes will be necessary for evaluating corrective action alternatives in the Focused Corrective Measures Study.

7. The third paragraph of the conclusions and recommendations section indicates that a Technical Impracticability Report will be prepared, since the goal of 75% reduction of contaminants in groundwater was not achieved; and that Monitored Natural Attenuation would be initiated following the July, 2014 groundwater monitoring event. The selection of a TI final remedy for groundwater at this site is presumptive and premature. Paragraph 41 of the Administrative Order (Docket No. RCRA-07-2009-0015) states that "The results achieved by Respondent's performance of Interim Measures can be considered and incorporated in the Respondent's study of alternatives and recommendation for the final remedy in a Corrective Measures Study." Paragraph 41 goes on to provide additional direction on the preparation of the CMS, as does the Statement of Work attached to the Order. While TI determinations have been made at some sites where there are dense non-aqueous phase liquids in bedrock, the relatively shallow contamination in the fill and silty clay zone does not pose hydrogeologic or contaminant-related factors that would inhibit significant remediation using established remediation technologies.

If you have any questions concerning these comments or wish to discuss, please call me at (913) 551-7755, or Christine Kump-Mitchell at (314) 416-2960.

Sincerely,

Bruce A. Morrison

Bruce A. Morrison
Project Manager
Waste Remediation and Permitting Branch
Air and Waste Management Division

cc: Christine Kump-Mitchell, MDNR
Rich Nussbaum, MDNR

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AWMD/WRAP/KNRP/BM:bft:05/06/14:H:AWMD/WRAP/Cores14/Morrison:commentltr.onGWmoni-toringreportdated4.4.14.doc

WRAP	WRAP
Morrison	Johnson
05/14/14	05/7/14

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